

EXPLANATION OF PLATE X.

INJURIES TO HIND-WINGS OF MASHONALAND AND Holarctic BUTTERFLIES.

Injuries inflicted at the anal angle or hind margin of one or both hind-wings, suggesting that the insect was being pursued or, if settled, approached from behind.

All the figures are $\frac{2}{3}$ of the natural size.

All the specimens not otherwise described were captured on the dates mentioned by Guy A. K. Marshall at Salisbury, Mashonaland, 5000 feet.

- FIG. 1. *Limnas chrysippus* ♀, July 14, 1901.
2. *Atella phalantha* ♀, Jan. 18, 1899.
 3. *Hypolimnas misippus* ♀, April 10, 1898. Flies like its model *chrysippus* until disturbed, when it is swift. Settles on low flowers. Lizards probable enemies. Very fresh specimen.
 4. *A. phalantha* ♂, March 26, 1899. Character of injury strongly suggests a bird's beak.
 5. *A. phalantha* ♀, Dec. 1900.
 6. *Byblia acheloia* ♂, Feb. 25, 1899. The species *A. acheloia* fly low at a medium pace, and settle on low flowers and occasionally on the ground, they rest on grass-stems. Lizards are probable enemies, but the character of the injury rather suggests a bird.
 7. *Acraa rahira* ♀, Dec. 31, 1898. March us its settling on flowers in low marshy places where lizards are not often seen, hence birds are more probable enemies. Mr. Marshall noted concerning the specimen here represented, when it was in the fresh state, "judging from the state of the abdomen this insect had been caught and rejected, presumably by a bird."
 8. *Nyetemera leucoœ*, April 8, 1901. Never settles on ground. It almost invariably covers its hind-wings directly it settles, assuming a **A** shape, although it occasionally walks a short distance with its wings erect. The injury was almost certainly inflicted during flight by a bird.
 9. *Pyrameis cardui*, var. ♀, Jan. 1900. Often settles on ground. Lizards probable enemies.
 10. *Byblia ilithyia* ♂, Jan. 27, 1899.
 11. *B. ilithyia* ♂, Feb. 1, 1899.

- FIG. 12. *B. achelöia* ♂, Feb. 22, 1899.
13. *Cyclopiodes willemi* ♂, March 1, 1899. A woodland insect settling on flowers and never on ground. Rests at night on grass-stems. Probably attacked on the wing, as the injury is unilateral and the butterfly closes its wings when settled.
 14. *Pseudonympha vigilans* ♂, March 17, 1901. A rock butterfly, lizards the probable enemies.
 15. *Junonia cebrene* ♂, Jan. 14, 1899.
 16. " " " Feb. 18, 1899.
 17. *C. willemi* ♂, March 11, 1899. If this butterfly was attacked, a bird is the probable enemy.
 18. *Herpænia eriphia* ♀, March 9, 1898. Flies slowly and rather low, settling on flowers and the ground like a *Teracolus*. Lizards the probable enemies.
 19. *Mylothris rüppelii* ♂, Feb. 1900. Slow flapping flight, settling on flowers and twigs of bushes in exposed positions. The wings are generally open during a short rest. The hind-wing was probably shorn through by a bird.
 20. *Terias senegalensis* ♂, Jan. 21, 1899.
 21. *T. regularis* ♀, May 24, 1901.
 22. *Belenois severina* ♀, Jan. 25, 1899.
 23. " " ♂, Feb. 15, 1899.
 24. *Catopsilia florella* ♂, Dec. 18, 1898.
 25. *Teracolus achine* ♂, April 16, 1899.
 26. *Argynnis cybele*, Aug. 2, 1897. Captured by E. B. Poulton, near North Lake, Hartland, Wis., U.S.A. A flower-haunting fritillary very probably injured by a bird.
 27. *B. severina* ♂, Feb. 15, 1899.
 28. *Epinephele janira* ♀, Aug. 15, 1900. Captured by A. H. Hamm, near Dawlish, S. Devon. Both hind-wings probably shorn through by a bird; lizards are not important enemies in this country. The straight line of the injury also suggests a bird's beak.
 29. *Melanargia galathea*, July 21, 1898. Captured by E. B. Poulton on the Stalden Rd., near Visp, Valais, about 2300 feet. The injury might well be by a lizard, but in Europe they are not nearly such important enemies as they become further south.
 30. *Lycæna icarus*, July 26, 1898. Captured by E. B. Poulton at Creux de Genthod, N.W. shore of the Lake of Geneva, 1230 feet. The character of the injury clearly suggests a bird.

- FIG. 31. *Vanessa atalanta* ♂, Aug. 23, 1897. Captured by F. A. Dixey at Morthoe, N. Devon. The injury can hardly have been produced otherwise than by a bird snipping a notch in all four wings when they come together in the attitude of repose as shown in the figure.
32. *Epinephele lycaon*, July 22, 1898. Captured by E. B. Poulton between Visp and Stalden, Valais, about 2450 feet. The same conclusion as in the description of Fig. 29.
33. *Vanessa atalanta* ♂, Sept. 23, 1901. Captured by A. H. Hamm in the University Parks, Oxford. The character of the injury implies an attack by a bird, probably made in one of the short rests when the insect assumed the attitude shown in the figure.

EXPLANATION OF PLATE XI.

INJURIES TO DIRECTIVE MARKS AND STRUCTURES ON THE WINGS OF SOUTH AFRICAN BUTTERFLIES.

Injuries inflicted in the neighbourhood of special marks or structures near the anal angle of hind-wing or apex of the fore-wing.

All the figures are about $\frac{2}{3}$ of the natural size.

All the specimens not otherwise described were captured, on the dates mentioned, at Salisbury, Mashonaland, 5000 feet, by Guy A. K. Marshall.

- FIG. 1. *Precis antilope* ♂, May 19, 1898. Rests on leaves of low herbage and rarely on the ground. Birds are the most likely enemies, and the specimen was probably at rest when both "tails" were shorn off.
2. *Precis euama* ♀, May 1900. Same habit and conclusions as in the last figure.
3. *Spindasis natalensis*, June 13, 1900. Captured by Champion B. Russell near Eshowe, Zululand. Flight very rapid, settles on outer leaves of trees and never on ground. Almost certainly injured by a bird.
4. *Precis archesia* ♂, March 9, 1901. This unilateral injury was probably inflicted on the wing.
5. *Charaxes guderiana* ♂, Dec. 31, 1898. All *Charaxes* here represented fly and settle like *S. natalensis*. Birds by